

Patent  
Case No: 48317US014

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of:

DANIEL A. JAPUNTICH ET AL.

Group Art Unit: 3761

Serial No.: 08/240,877

Filed: May 11, 1994

Examiner: A. Lewis

For: UNIDIRECTIONAL FLUID VALVE

**DECLARATION OF ROBERT BETTS**

I, Robert Betts, state as follows:

1. In 1965 I began building and repairing 2 and 4-cycle engines and continue to do so today.
2. I presently work for and own Assault Motor Sports, a unit of General Tool and Engineering Inc. Assault Motor Sports is involved in producing and modifying high-performance 2-stroke engines. In the past year alone, I estimate that I have constructed over 30 2-cycle, high-performance engines, all of which have had reed valves. The total number of 2-cycle engines that I have either built or worked on in my 36+ years probably exceeds 250 engines.
3. I have reviewed U.S. Patent 3,191,618 to C.D. McKim. This patent describes a curve seat reed valve that is useful in a 2-cycle engine. In particular, the patent discloses a valve reed 14, of spring sheet material, such as, for example, shim stock, that is secured by an anchor bar 15 and screw 17 to a curve seat 18 that is formed on the inner or engine side of a valve block 10. The main thrust of the disclosure in the McKim patent is to the use of the curved valve seat 18, which is configured to conform to the normal curvature of the valve reed 14. To define this curvature, the valve reed 14 is mounted at an end portion 27 as shown in Fig. 3 and is stressed by applying a T-shaped member 30 at the free end 29 of the reed 14. The flexed curvature that is created is reproduced on the valve seat 18.
4. I have also reviewed the disclosure in U.S. Patent application Serial No. 08/240,877. I understand that this application discloses an exhalation valve for a filtering face mask. The exhalation valve uses a flexible flap as the dynamic member for opening and closing the valve. The application defines the term flexible to mean that "the flap can deform or bend in the form of a

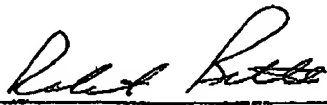
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self-supporting arc when secured at one end as a cantilever and viewed from a side elevation (see e.g., Fig. 5)."


5. Since 1965, the 2-cycle engines that I have either constructed or worked on have used a reed valve of varying degrees of stiffness. None of the reed valves that I have encountered, however, were "flexible" as the term has been defined in the above-captioned patent application and recited in paragraph 4 above. Reed valves that are used on 2-cycle engines can bend when exposed to a force such as shown in Fig. 3 of the McKim patent. The reed valves, however, are not so flexible that they will bend in the form of a self-supporting arc when secured at one end as a cantilever. Reed valves do not bend in the form of such an arc in response to the mere force of gravity. If the valves were constructed to have that degree of flexibility, the 2-cycle engines in which they were used would surely not be operative. If secured at one end as a cantilever and having a free end that projects from the point of securement, a reed valve would project in an essentially straight line when viewed from a side elevation. The degrees of stiffness that reed valves possess are orders of magnitude greater than the flexible flaps that are used on exhalation valves.

The undersigned petitioner declares further that all statements made herein of his own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Dated this 7th day of December, 2001.

  
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Robert Betts

  
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Witness

  
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